THE GENESEE FARMER.

VOL. VII. ROCHESTER, N. Y. FEBRUARY 11, 1837. NO. 6.

PUBLISHED BY LUTHER TUCKER.

TERMS.—The Farmer is published every Saturday, making an annual volume of 416 pages, to which is added a Title-page and Index, at the low price of $2,50, or $2,00 if payment is made at the time of subscribing.

☞ All subscribers must commence with the volume, Jan. 1, or with the half volume, July 1. No subscription taken for less than six months.

☞ THE MONTHLY GENESEE FARMER is made up of selections from this paper, and published on the first of each month, forming, with Title-page and Index, an annual volume of 200 pages, at the low price of FIFTY CENTS a year, *payable always in advance.*

GENESEE FARMER.

SATURDAY, FEBRUARY 11, 1837.

Value of Straw as Food for Cattle.

Says Davy in his Chemistry of Agriculture,— 'the straw of barley contains only two per cent of substance soluble in water, and having a slight resemblance to mucilage; the remainder consists entirely of fibre.'

Says Chaptal in his Chemistry applied to Agriculture, —"I do not believe there is in the whole vegetable kingdom, an aliment affording so little nutrition, either for plants or animals, as the dry straw of grain; serving only to fill the stomachs of the latter, and furnishing to the former, but about one hundreth part of its weight of soluble manure."

Perhaps no two men have ever lived to whom agriculturist sowe a greater debt of gratitude than to Davy and Chaptal; or whose opinions on most topics may be sooner taken without question or examination. But the sentiments advanced above, and the arguments by which they are supported, we consider so entirely at variance with the experience of most farmers in this wheat growing country, that an investigation of the cause of this discrepancy cannot be entirely useless.

In Western New York, where most of the cultivated land is necessarily under the plough, the farmer places great reliance on the straw of his wheat and barley fields for carrying his stock through the winter. If his supply of hay is sufficient for his cows, working horses, and sheep, he is generally satisfied; the remainder, such as oxen, colts, and young cattle, mainly subsist upon straw. If a few corn stalks are saved, they are considered as entitled to a share; and they are permitted the pickings of the yard, and the refuse hay of the stables; and it is barely possible that in some extra cold or stormy days they receive a little hay; further than this their living is straw.

It would not do to affirm that cattle so kept, come through the winter as well as if kept on good hay and warmly stabled; yet unless we are much mistaken in our recollections of eastern farming, and New England stock, the comparison between their animals that rarely see such a thing as straw, and are fed entirely on hay, and ours, that as rarely get a mouthful of hay, in the spring of the year, would not be altogether in favor of the former. Yet how can this be, if our philosophers are correct in their assertion that barley straw, the best of the straws for fodder, contains but two per cent of alimentary substance, while the various kinds of hay average from 25 to 40 per cent of nutritive matter?

We think the discrepancy between the theory and the fact, arises from this circumstance. They consider as nutritive matter, only that part which is soluble in water; and this, every farmer knows in dry straw must be very small, being as they affirm, only two per cent, while the remainder, consisting of fibre, is by them rejected as totally worthless. Thus it seems according to the theory an animal must eat 100 pounds of straw to get two pounds of nourishing matter; a hard mode indeed of getting a living. But what is this fibre which constitutes the greatest part of straw, and of all vegetables, and which is by the authority quoted above, denounced as good for nothing as food? According to the authority of Berthollet, Fourcroy, Thomson, and Chaptal himself, the fibre of plants, in its ordinary state of dryness, and when separated from all adventitious substances, is composed of about 43 parts of carbon and 57 of water; or in other words, of 43 parts of carbon and 57 of oxygen and hydrogen in the same proportions in which they form water. Now these substances in themselves enter into the nourishment of animals in but small quantities, and if the straw when taken into the stomach remained straw, or the fibre continued to be fibre, it would of course do them little or no good.

But by a wise provision of nature it requires but a slight chemical action to convert fibre into starch, or into sugar, the first of which constitutes the great bulk of flour of all kinds, and the last of which is one of the most nutritive substances in the whole kingdom of nature. Maple sugar is composed of 42 parts carbon, and 58 parts water; and starch from wheat dried at 212° deviates in its composition from sugar but a single shade. It is seen at once that but a slight action of chemical agencies, and those precisely such as are furnished by the stomach, is necessary to convert the pulverized straw or fibre into nutritive matter. In fact fibre of various kinds has been converted by Braconnet into sugar; and the wood of several kinds of trees into a very palatable bread.

Within two or three years a patent has been taken out in France for the conversion of straw into food for cattle or horses; and it is asserted that while the expense of preparation is trifling, the prepared article has been proved by experience to be superior to bran as food for cattle. The more completely the fibre of the straw can be submitted to the chemical action of the stomach, the more rapid and fully will its nutritive qualities be developed; hence the improvement effected by cutting straw or cornstalks, as practiced with us, or still more by cutting and grinding as is part of the present method in France.

But our chemists themselves have furnished a refutation of the principle that the power of nutrition depends on the solubility of any given substance in water. At page 105 of the American edition of Chaptal's Chemistry of Agriculture, he says, "*It is surely erroneous to pretend to determine the quantity of nourishment, by that portion which can be extracted from any article of food by water;* but upon this principle Davy has represented the nutritive power of beets by the number of 136, and that of carrots by 98; while M. Thayer has by his experiments, estimated that of the first at 57, and that of the last 98. Upon the same principle Davy has valued the effects of linseed cakes at 151, compared with beets at 136, whilst it has been proved that 70lbs. of beets are hardly equivalent in nourishment to 10lbs. of linseed cakes."

There can be no doubt that our farmers frequently place too much dependence on straw; certainly since the introduction of machines which have greatly lessened its value, and their stocks suffer accordingly. Experience has however shown that its real value is much greater than has been attributed to it by chemical men; and it has also made known another fact, which should never be forgotten or overlooked by the farmer, that the value of straw, stalks, and even hay, is in a great measure depending on its fineness, when taken into the stomach.

"Nothing is beneath the attention of a great man."

This short sentence is inscribed over the door of the small building in Holland, which was once the workshop of Peter the Great; and furnishes, more than volumes of common description and history could do, an insight into the character of the man who raised the Muscovites from the deepest barbarism to the rank of civilization, and laid the foundation of an empire, the extent of which the world as yet seems little able to comprehend.

One of the most fatal errors to which men are subject is the disposition to treat small things with contemptuous indifference; forgetting that great things are but an aggregate of small ones, and that discoveries and events of the greatest importance to the world can be traced to things most insignificant in themselves. Nothing more truly marks an original mind, and stamps its possessor as a truly great man, than the seizure of circumstances which would pass unnoticed by the great multitude, and by subjecting them to the powerful analysis of his reasoning powers, deducing inferences of the greatest practical results.

The power of the loadstone to attract iron, has been known from time immemorial; accident discovered the fact that a magnetized needle would indicate the north, but for a long time this truth was productive of no results. In the hands of Flavia Gioja of Amalfi it produced the mariner's compass, an instrument which has changed the whole course of commerce, and opened America and Australia to the rest of the world. To mention only one of the things that the use of the compass in maratime discovery has led to—it has given the potatoe to Europe, and thus trebled the means of subsistence as well as doubled the population.

We owe the Galvanic or Voltaic battery, one of the most powerful instruments in advancing science the world has yet seen, to Madame Galvanis noticing the contraction of the muscles of a skinned frog accidentally touched by a person on whom her husband was at the moment making some experiments in electricity. The experiments of Galvani and Volta were followed up by Davy, Hare, and Silliman, and effects which have astonished and instructed the world, have been the result. The dry galvanic pile in the hands of the discoverer, De Luc, was nothing more than a scientific plaything. Singer of London, a mechanic of genius, saw the pile, and applied the power thus generated to moving the machinery of a watch; and one constructed by him has now run more than sixteen years without winding or loss of motion.

A chemist was at work, in his laboratory preparing a powder for a certain purpose. A spark fell into this composition and it exploded; and from that day gunpowder was discovered. Some may question the utility of this discovery, but we do not. Gunpowder has materially aided the miner, the founder, and the chemist;—it has made war, where now carried on between nations, a much less evil than formerly;—but more than all, it has given internal order and tranquility to the kingdoms of Europe by knocking down those strong holds of feudal barbarism and cruelty, the castles of a haughty and domineering nobility, and placing the weak, so for as regards protection by law, and security to person and property, on a level with the highest.

A German peasant carved letters on the back of the beech tree, and with them stamped characters on paper for the amusement of his children. Nothing more was thought of them; but from them Faust conceived and executed movable type; and printing, an art that perhaps has exercised a greater influence on the destiny of mankind than any other, thus had a beginning.

Galileo was in a church at Florence where a drowsy Dominican was holding forth on the merits of the Virgin, and the miracles of the Holy Church; things about which the philosopher cared very little. The principal lamp of the church had been left suspended in such a manner that it swung to and fro in the slightest breath and caught the eye of the philosopher. The regularity of its oscillations struck him, and the idea of employing such vibrations to measure time occurred. Galileo left the church and returned to his study, and in a short time the first pendulum ever made was swinging.

Some children, playing with the glasses of a Dutch spectacle maker, accidentally placed two so that the steeple of a church appeared much nearer and turned bottom upwards. From this small beginning was produced the telescope; an instrument which more than any other, has enlarged the boundaries of the universe, and given to man more exalted ideas of that Being who spake all these worlds into existence.

About one hundred and fifty years ago an old man might have been seen in his study apparently amusing

himself by witnessing the escape of steam from an old wine bottle and then checking it by instantaneously plunging it into the cold water. There are multitudes who would sneer at an observer of nature who could stoop to notice such a trifle; yet this expension and condensation of steam in the wine bottle, and the train of thoughts which it suggested, in the hands of the Marquis of Worcester, gave birth to the Steam engine, the most valuable present Science has ever made to the Arts. These very men who are now filled with delight and astonishment when they behold the beautiful steamboat majestically ploughing the waves, or the steam can whirling its train of carriages over the railroad with almost the rapidity of thought, would be the first to look and speak with contempt of the train of small causes that led to such important results.

But perhaps the example of Newton, more then any other, conclusively proves that there is in the whole circle of nature, nothing trifling to a truly great mind. Thousands had seen apples fall from the trees to the earth; yet no one had ever asked the question weather the cause that caused the apple to fall to the earth extended to the moon?—yet this quostion and its solution was the key that has unlocked the mechanism of the universe, and given to men powers and ideas, which could otherwise never have existed,

The great truth these examples inculcate is this—that there is nothing trifling in nature, nothing that is not worthy of attention and reflcetion, nothing that does not form part of the great chain of cause and effect, and consequently cabable of leading to the most valuable and interesting events. There is a feeling abroad, that it forms no part of the business of the tiller of the soil to think. This is not true, and the position should be exploded at once, It is scarcely posible for a man to be more favorably situation for an observation of nature then the former. His business is with the sail he treads upon, with its various constituents and their ever varying proportions —with the green earth and its covering of grapes and plants, its trees and its flowers—while over head is streched the broad oer-arching sky, inviting him to useful reflection, and urging him to "look through nature, up to natures God.

☞ We shall answer Mr. Whitmarsh's last appeal to the public, which we have received in the New-England Farmer of the 1st inst. in the same channel in which it was given to the public, and show him as destitute of truth as he has shown himself destitute of honesty in his dealings with his fellow men. We may however, again revert to it in our own columns. In the mean time we publish the following common sense view of the question at issue, from the February No. of the Virginia *Farmer's Register*. It is the editor's introductory remarks to the letters of Messrs. Whitmarsh and. Huntington, with our accompanying statement, published in this paper on the 24th Dec. last.

[*From the Virginia Farmer's Register.*]

Mr. Whitmarsh and his Agent.

In the last No. of the Farmer's Register, we inserted from the "*Silkworm*," an account of the *transactions* of Mr. Whitmarsh, in regard to *his* Chinese mulberry seeds and plants, with our comments thereon. We now republish, from the Genesee Farmer, the defensive replies of both Mr. Whitmarsh and his agent, to an editorial article of severe and well deserved censure, which had appeared in that paper. We are quite willing to make Mr. Whitmarsh's defence as extensively known, as the censure of his course: but, notwithstanding, will express our opinion, (very different from some of our brother editors,) that his letter falls far short of excalpating him from the intention to deceive purchasers, and willingness to pocket the profits of their being deceived. What the purchasers wanted, and expected to obtain, was the *Morus multicaulis*, universally understood to be meant, in this country, by the name of "Chinese mulberry,"—and not *another Chinese mulberry*, the merits of which are just now discovered, or brought to light, by Mr. Whitmarsh's observations, and which may, or may not be, superior to the *Morus multicaulis*–and which few persons would have cared to buy, if announced in that manner at first, and still fewer *now*. As to Mr. Huntington, the agent, his best defence would have been, that he, like the public in general, was *cheated* by the language of his principal's first recommendatory statement: but he has forfeited that ground of defence, by having failed to expose and apologize for the deception, after he learned it, and by continuing to press on the public sales of this mulberry—whether a new and valuable species, as alleged, by Mr. Whitmarsh, or merely *dead* plants and damaged seeds of the common white or Italian mulberry, as supposed by the nurserymen who have planted them. If Mr. W. had at first stated, plainly and fairly, his views as now expressed, as to the superior value of a new variety of mulberry, his opinions would have passed for what they were worth. No blame could have attached to him in case of disappointment to those who might have relied on these first and hasty impressions—and if not found to be mistaken, he would have been justly acknowledged (as his defenders claim to be his due,) to have acted from a desire to benefit the interests of his country. But it is evident that such a course would have put but little money in his pocket, compared to the inducing a belief that purchasers would obtain from him seeds and plants of a variety whose value was already so well known, that the eagerness to possess it seems something similar to the prevailing mania for speculation in gold mines and western lands. Hence, a sufficient reason for Mr. Whitmarsh's choice, supposing him to prefer solid cash, to barren praise and honor.

From the Southern Agriculturist.

On Pise Buildings.

Charleston, 2d Dec. 1836.

Mr. Editor—I am glad to see that this useful mode of building is beginuing to occupy t.e attention of farmers throughout the United States. Since my last communication on the subject, many interrogatories have been made, which, when I wrote, I did not anticipate. I cannot lay before the public any thing more interesting, than the following article upon Pise, which a friend of mine has put into my hands. The following preface explains the history of the work.

In the year 1791, a work was published at Paris, by M. François Sointeraux, containing an account of a method of building strong and durable houses with no other materials than earth, which has been practised for ages in the province of Lyons. It appeared to be attended with so many advantages, that several gentlemen in England, who employ their leisure in the study of rural economy, were induced to make trial of its efficacy; and the event of their experiments has rendered them anxious to extend, by all possible means, the knowledge and practice of so beneficial an art. With a view to promote this desirable end, the account contained in the following pages has been extracted from the French work; and it will be found to contain every necessary information by those into whose hands the original may not have fallen, or who, being unacquainted with the language, may have been prevented from consulting it. The appearance of those wretched hovels which are built with mud, in most parts of Ireland, will perhaps dispose many persons to doubt the strength and durability of houses whose walls are composed of no other materials than earth. The French author says, "The possibility of raising the walls of houses two or even three stories high, with earth only, which will sustain floors loaded with the heaviest weights, and of building the largest factories in this manner, may astonish every one who has not been an eye witness to such things." But it is hoped that a description of this manner of building will sufficiently explain the reason of its superiority.

Of Pise and its origin—Pise is a very simple operation; it is merely by compressing earth in moulds or cases, that we may effect the building of houses of any size or height. This art, though at present confined almost to the Lyonese in France, was known and practised at a very early period of antiquity, as appears from a passage in Pliny's Natural History. M Goiffon, who published a treatise on Pise in 1772, is of opinion that the art was practised by the Romans, and by them introduced into France; and the Abbe Rosier, in his Journal de Physique, says, that he has discovered some traces of it in Catalonia: so that Spain, like France, has a single Province, in which this ancient manner of building has been preserved. The art, however well deserves to be introduced into more general use; the cheapness of the materials, and the great saving of time and labor which it affords, must recommend it in all places, and on all occasions. But the French author says, that it will be found particularly useful in hilly countries, where carriage is difficult, and sometimes impracticable; and for farm buildings, which, as they must be made of considerable extent, are usually very expensive.

Method of working.—Let us not confound Pise with the miserable way of building with clay or mud, mixed with straw, as practised through Ireland. Nothing can, in reality, be more different. Those wretched huts are built in the very worst manner that can be imagined; whereas pise contains all the best principles of masonry, together with some rules peculiar to itself. The elevation and plan of a house, the building of which I will regularly describe according to the method of pise.

The foundation must be of masonry, eighteen inches thick, and may be raised to a foot or eighteen inches above the ground; which is necessary to secure the walls from moisture or splash. Mark upon them the distance at which the joists are to be set for receiving the mould. These should be three feet each from centre to centre. This will leave six inches at each end, which serve to lengthen the mould at the angles of the house. After having set the joists in their places, the masonry must be raised between them, six inches higher than the upper side of the joists. Raise the mould immediately on the masonry, as described, placing it over one of the angles of the wall. The head of it, which is to be placed against the angle, should have eighteen inches in breadth at the bottom, and only seventeen inches and a half at top. Thus the sides of the moulds will incline towards each other, and produce the necessary diminution. The wedges must then be driven in, the posts well fixed by cords, and the head of the mould secured by iron pins.

A workman should be placed in each of the three divisions of the mould; the best workman at the angle. He is to direct the work of the other two; and by occasionally applying a plumb-rule, to take care that the mould does not swerve from its upright position. The laborers who prepare the earth must give it in small quantities to the workmen in the mould, who, after having spread it with their feet, begin to press it with the rammer. They must only receive so much at a time as will cover the bottom of the mould to the thickuess of three or four inuhes. The first strokes of the rammer should be given close to the sides of the mould; but they must be afterwards applied to every other part of the surface. The men should then cross their strokes, so that the earth may be pressed in every direction. Those who stand next to one another in the mould should regulate their strokes so as to beat at the same time under the cord; because that part cannot be got at without difficulty, and must be struck at obliquely. With this precaution the whole will be equally compressed. The man at the angle of the wall should beat carefully against the head of the mould; and to increase the strength of the building it is usual to spread, every six inches high, a layer of mortar near the head. Care must be taken that no fresh earth is received into the mould till the first layer is well beaten, which may be ascertained by striking it with the rammer. The stroke should leave hardly any print on the place. They must proceed in this manner, to ram in layer after layer, till the whole mould is full. When this is done, the mould may be taken to pieces, and the earth which it contained will remain firm and upright, about nine feet in length, and two feet and a half in height. The mould may then be replaced for another length, including one inch of that which has first been completed.

When the workmen have gone round the whole building, they must begin upon the partition walls, where the head of the mould must be used to form the door jams.

Such is the method of building which has been practised by the Lyonese for many centuries. Houses thus built are strong, healthy and very cheap. They will last a great length of time; for the French

author says he had pulled down some of them, which, from the title deeds in the hands of the proprietors, appeared to be above a century old. The rich traders of Lyons have no other way of building their country houses. An outside covering of painting in Fresco, which is attended with very little expense, conceals the nature of the building, and is a handsome ornament to the house. The method of painting has more freshness and brilliancy than any other, because water does not impair the colors. No size, oil, or expense is required: manual labor is almost all it costs, with a liitle red or yellow ochre, or other mineral colors.

Strangers who have sailed upon the Rhone, probably never suspected that those beautiful houses which they saw rising on the hills around them, were built of nothing but earth.

There is every reason for introducing this method of building into all parts of this country, whether we consider the honor of the nation as concerned in the neatness of its villages, and the consequent health of the inhabitants, to which it will greatly contribute (as such houses are never liable to the extremes of heat or cold); or whether we regard the project on an economical or an expeditious scale, by saving both time and labor in building, and rendering the houses thus built almost immediately inhabitable after they are finished; for which latter purpose, the holes made for the joists should not be closed up directly, but left for the air to dry the walls more speedily.

Method of forming the openings for Doors and Windows.—The openings for the doors and windows must be left at the time of building the walls. This may be done by placing within the mould either two or one of the heads, wherever the wall is to terminate, and the opening commence. They should be made sloping a little, in order to leave room for the frames and sashes.

On the description of compressed Earth.—Upon beating a small portion of earth, it was found to contain thirty-nine pounds and a half. Fifteen days after it had lost four pounds and a quarter. In the space of fifteen days it lost but one pound; and in fifteen days after that, it diminished only half a pound. In the space of forty-five days the moisture was completely evaporated, and its weight was diminished about one eighth. This small portion of moisture cannot at all affect the solidity and consistency of the earth so treated. This experiment is also sufficient to show the difference between this kind of building, and that vulgar kind, called in Ireland, "mud walling." The latter cannot be executed without adding a great deal of water, which occupies a considerable space in the mud; leaves, in evaporating, an infinite number of pores or little cavities; and thus the walls become weak and brittle, and incapable of supporting much weight, as beaten earth or pise can sustain.

On Earth proper for Pise.—First, all earths in general are fit for that use, when they have not the lightness of poor lands, nor the stiffness of clay.

Secondly, All earths fit for vegetation.

Thirdly, Brick earths.

Fourthly, Strong earths, with a mixture of small gravel, which, for that reason, cannot serve for making either bricks, tiles, or pottery, but make the best pise.

The following appearances indicate that the earth in which they are found is fit for building. When a pick-axe, spade or plough brings up large lumps of earth at a time—when arable lands lie in clods or lumps—when field mice have made themselves subterraneous passages in the earth: all these are favorable signs. When the roads of a village, having been worn away by the water continually running over them, are lower than the other lands, and the sides of those roads support themselves almost upright, it is a sure mark that the pise may be executed in that village.

Proper earth is found at the bottom of the slopes of low lands that are cultivated, because every year the rain brings down the good earth. It is also found on the banks of rivers. If the earth to be had is not quite fit, it may be mixed to make it so. Strong earths must be tempered with light; those in which clay predominates, with others composed more of chalk and sand; and those of a rich substance with others of a poor nature. It will not be amiss to mix with the earth some small pebbles, gravel rubbish of mortar, or any small mineral substances: but none of the animal or vegetable kind must be admitted. Such hard substances bind the earth firmly between them; so that well-worked earth, in which there is a mixture of gravel, becomes so hard at the end of two years, that a chisel must be used to break it, as if it was freestone.

Experiment to ascertain the qualities of any Earth.—Take a small wooden tub without a bottom, dig a hole in the ground, fix a piece of stone or flag at the bottom, place the tub upon the stone, fill round it the earth you dug out, and ram it well, to prevent the tub from bursting; then ram into the tub the earth you intend to try, a little at a time, as described. When the tub is full, loosen the earth around it, and take it out with the compressed earth in it; then turn the tub upside down, and the pise will come out. If not immediately, let it stand to dry, and it will fall out of itself. Leave the lump to stand some time; and if it do not crack, but increase in hardness, it is fit for building. This experiment may be made in a small box, in the hand. Every person, in walking over his grounds, may make little balls of earth, and press them, as tight as he can, between his hands. If he brings them home, and puts marks on them, he will by that means know the quality of every piece of land, and also be a judge of the mixture it will be necessary to make.

All the operations of this art are very simple and easy. There is nothing to be done but to dig up the earth, break the clods with a shovel, and to lay it in a heap, where the large lumps are to be drawn away by a rake, in which there may be intervals of an inch and a quarter between the teeth, that the stones and pebbles of the size of a walnut may remain.

It is necessary to lay in binders or bonds when the first course is laid, and the mould fixed for the succeeding one. Lay in the bottom of it a board, rough from the saw, about five or six feet long, eight or nine inches broad, and about an inch thick. there will be some inches of earth on each side, by the wall being so much thicker. This will entirely conceal the board in the wall, and prevent its rotting. In the next course, or in the middle of the mould, there may be short ends of boards, laid across so that they shall not come through, but be concealed also in the wall. These may be at two or three feet intervals, and crossing each other at the angles. This will serve much to equalize the pressure. When the wall is completed to the height of a story, boards of three or four feet in length should be placed on the pise, in those places where the beams and rafters are to be fixed, which may be laid on as soon as the mould no longer occupies that place.

With respect to walls for very large enclosures, there may be two moulds, and two sets of workmen to expedite.

Besides the advantage of strength and cheapness, this method of building possesses that of speed. To give an idea of the time that is necessary to build a house or an enclosure, a mason used to the work can, with the help of his laborer, build in one day four square yards, or thirty-six squrae feet of pise; therefore, six men, which is the necessary number to work the mould, will build in one day twelve square yards,* or one hundred and eight square feet; or in a week, six hundred and forty-eight feet. By this it is easy to calculate the time necessary for building a house or wall of any dimensions. These facts, which have been proved by numberless instances, afford a criterion by which every one may determine the time that his house or wall will take in building, haviug first ascertained the number of feet it will coutain. Thus if he wishes to have a wall built five hundred and forty feet long, and six feet high, with one mould and six men, it will furnish eighteen feet running measure, or one hundred and eight square feet in one day. It will be completed in thirty days, comprehending in the whole, three thousand two hundred and forty square feet.† As to the expense, it being only the labor, except the mould and the materials (scarcely any thing,) the five common laborers at 1s. per day, and the conducting builder at 2s., make 7s. per day. It will be finished for 10l. 10s.

* This is the calculation as translated from M. Cointereaux; which, to render more familiar to the building in this country, is three and a half perches.

† One hundred and four perches.

The plastering and rough-casting, or dashing, should not be done for five or six mohths after the walls are built, and they should always be built between the months of March and October inclusive. To prepare the walls for plastering, indent them closely with the point of a hammer or hatchet.

By a reference to an article which I published some time since, in your Journal, it will be perceived that in many particulars the plan of building laid down as above corresponds with my views. I would simply suggest, however, that in the mode of constructing the moulds, &c. I consider my method, not only more simple, but in every respect cheaper.

BARTHOLOMEW CARROLL.

[*From the New England Farmer.*]

Bone Manure.

MR. EDITOR:—For two or three years past, I have used Bone Dust in considerable quantities, and in a variety of ways. In all cases it must first undergo a fermentation. This is done by putting it in a heap, and moderately moistening it—or in casks. It is known to be in fermentation by the heat and the strong smell.—Before being fermented it is white or color of the bone. After, it assumes a yellowish cast.

On an old timothy meadow, I spread at the rate of about 24 bushels to the acre as a top dressing. Half of the lot was very decidedly inferior to the other. On this half I applied the dust early in the spring. At mowing it was altogether superior to the other, which received no manuring.

In the compost with ditch earth, I top dressed a portion of an old meadow that did not produce grass enough to pay for mowing. The application was made just as the mower was bidding a welcome adieu. At moving there was a heavy swath—I should think at least four times as much as the previous year—principally red-top.

For turneps I have used it broad-cast, and in drills—alone and in compost—in most instances with very good effect.

In compost with soil and yard manure, I have found it markedly seperior to the best of yard manure for pickles. In that part of Weschester County, where my farm is, almost every farmer raises pickels for market—from quarter of an acre to ten or fifteen acres are planted. The seed is put in the ground in July, and the crop comes off in time for wheat. At some future day, I may give you more particulars. The past season I planted about an acre, and let out on shares another acre in an adjoining lot. In both the compost of bone showed itself to much advantage. In compost I should recommend it as being more certain and decidedly beneficial. My farm is hilly and sandy loam.

Composts, or a change of manures, I consider next in importance to a rotation of crops. As a general rule, I believe that we do not secure perfect vegetation without the application of a variety of manures—that this vegetation is less congenial to the stomachs of our live stock—consequently that they do not thrive as well, and that they do not produce as good milk and butter. This idea has science and reason to support it. S. F.

New York, Jan. 29, 1837.

On tho Growth of Plants, &c.

When plants advance but little in their growth, and assume a very dark or blue green color, it shows a want of water, or an obstruction to the action of the capillary attraction; and when a plant is of a light green color, and is diminutive and puny in its growth, and there is evidently no want of water, it shows a want of carbonaceous matter, or a general deficiency of nutriment. If plants and trees grow very luxuriantly in branches, forming large leaves, and producing little fruit, it shows that there is a luxuriant supply of hydro carbonate, or an excess of carbonaceous matter, lying at a great depth from the surface, and a want of oxygen; when the leaves and branches are deformed and distorted by blisters and blotches, and by irregular contractions and contortions of the stalks, fibres, veins, or ribs of the leaves, or when tumors break out on the leaves and shoots, it shows that an excess of prutrescent carbonaceous matter, containing nitrogen, surrounds he roots.—*Hayward on Horticulture.*

COMMUNICATIONS.

Mr. Parker's Road Bill further examined.

No. IV.

Under a code of laws like that proposed by Mr. Parker in his bill, commissioners of highways will hold very important and responsible offices. As this will be understood, and as they will be elected for three years, it should be expected that men will be sought for to fill these offices who possess appropriate qualifications. We must be allowed to remark here, that the practice now become so prevalent, of trying at town meetings the strength of political parties, is very prejudicial to the interests of community. It is a silly practice, and ought to be abolished. Search after candidates for town officers should be made among all the respectable inhabitants of the town, and not among those only who belong to the strongest party. It will be important under the amended system, that at least commissioners be elected without regard to politics, and with regard only to personal qualifications. As the term of their service will be long, as they will know that much is required and expected of them, and as they will be well compensated for their services, it is reasonable to expect that they will devote much of their time and attention to their official duties. It may be expected that they will make themselves acquainted with the condition of roads in their respective towns, and labor to acquire knowledge of the best methods of making roads, and keeping them in repair. It may be expected too that they will maintain, or cause to be maintained, a constant watchfulness over the roads, at all seasons of the year, and never suffer them to get badly out of order. Thus, from preventing damages, nothing of which is done under existing laws, would result an immense saving of labor.

It is likely the commissioners will dispose of much of the work necessary to be done on roads, by contracts. In a little time, as the system comes into successful operation, there will be contractors enough. Men having a taste for that branch of business, and possessing the means of executing it, will seek for jobs on the roads. Having taken jobs, it will be their interest to devise the cheapest and most economical methods of executing them. Hence will originate incitements to ambitious enterprise, from which it may be expected important improvements in the art of making and repairing roads, will result.

Sections 13 and 14 of the bill now under consideration, are obviously exceptionable. Section 13 is exceptionable because it requires of the boards of supervisors services which they could not render. No means being provided by the bill for furnishing to them the names of persons in the several towns who would be liable to the poll tax, they could not levy that tax. Section 14 is exceptionable, 1st, because it provides for expensive and needless formalities in arriving at the object in view. 2d, Because moneys could not be raised, according to the provisions of that section, in season to be advantageously applied to the use of roads. Substitutes for these sections have been prepared, and they have been recently published in the Genesee Farmer. These, so far as we can see, meet the case. It will be seen that the substitutes propose to invest the commissioners of highways with independent and plenary powers of taxation. We think such powers, to be exercised only for the use of roads, could not be lodged in a more suitable board. A system of finance thus settled will have no clogs by nseless formalities. Of course it may be expected it will be energetic, prompt in its developments, and seasonable always in its results. It will give to commissioners no greater powers than appertains now, and always have appertained to such officers. Commissioners have always determined the amount of taxation for the use of roads, levied it, and caused its collection. From the views thus taken of Mr. Parker's road bill, we give it our approval, excepting only the two sections for which substitutes are provided.

After all it appears to us the bill is yet incomplete. We think provision should be made for the appointment in each of the counties of a board of county officers. This board may consist of three officers, to be called superintendents of highways, and be appointed by the boards of supervisors. They may hold their offices either during the pleasure of the appointing power, or for a limited time. This board should have power to lay out and establish new roads, whenever such roads shall be needed to extend from one town into another, and when new roads shall be needed to extend from one county into another, the superintendents of the two counties concerned shall form a joint board, for the transaction of such business. All roads laid by such authorities should be recorded, as are those laid by commissioners, in the towns in which they are situated. The board of superintendents should constitute the only court of appeals from the doings of commissioners. This board in each of the counties, may be authorised to employ a county agent, at the expense of the county, whose duty it shall be to inspect all the roads in the county and give advice to commissioners as to the best methods of making roads, and improving such as are made. Would not a provision like this be the means of accelerating the improvement of roads? D. B.

Onondaga County, January, 1837.

Leaves for Manure.

Mr. Tucker—In the Genesee Farmer of Nov. 12th, is a long article copied from the New-England Farmer, on the subject of leaves for manure, detailing the practice in different parts of Europe, and of one farm in Massachusetts. I do not mean to condemn the practice of gathering leaves for this important object, nor to say that it may not be profitable in the places alluded to, and in rocky and barren countries where farmers are obliged to resort to every possible means to obtain manure, and where little or nothing can be produced from the land without it, or where it is worth from two to four dollars per cart load for garden purposes—but that it can be made profitable in Western New-York, I have my doubts. If J. M. G. had stated the quantity of leaves two men with a team would gather in a day, and the probable weight of manure thus added to his farm, and the value per ton, I could judge better, but allowing two men with a team to rake and gather into the shed half a ton of leaves in a day, how much would he add to his stock of manure to carry out on his land in the spring? I think not more than one cart load, worth from 4s. to 6s. which, if no other benefit were to be derived from the operation than the value of the manure, would allow but small wages for men and team. It is true they would prove very comfortable bedding for the cattle and pigs, but the farmer who does not produce cheaper litter from his land than leaves, is too poor to need any such article for the comfort of stock, or an agricultural paper to teach him the rudiments of agriculture. If it be said that straw is too valuable to use in the stable, that it will bring 4 or 6cts. a bundle in market, then it is certain that where such a market is found, manure can be bought for 3s. or 4s. a load, and will pay the farmer for transporting it home when he has sold his straw, and in that case cost less than leaves.

I have not a very high opinion of leaves as a manure at any rate, and consider them of but little use, however well rotted, unless previously worked in the yard and mixed with dung. Judging from my own experience, two loads of common soil thrown into my barn yard in the fall, to be carried out in the spring, is worth quite as much as the manure that would be produced by half a ton of dried leaves.

I was acquainted some years ago with a wealthy farmer in a neighboring state who kept a large stock of cattle without purchasing any fodder for them; he was called the best farmer in the town, and fatted yearly some of the finest oxen that were driven to the New-York and Philadelphia markets. When asked the secret of his great success in farming, he would turn your face away from the fine stock you were praising, and point you to his heaps of rich manure, which he would say told the whole story. He had plenty of wood land, but I never knew him to gather a load of leaves; he had plenty of straw, but I never knew him to sell a bundle of it, nor of his carting a load of hay to market. But I do know that he was in the habit every year of carting into his barn yard large quantities of common soil, and spreading it several inches thick where the dung had been previously removed, all which was carried out upon his land the following season. The yard that contained the secret of this man's wealth was of ample dimensions, but had no drains to accommodate the milk-maid with thin shoes, even in the wettest season.

I have used some hundreds of loads of decomposed leaves, taken from swales and low places in my woods, and do not find it valuable unless rendered so by a generous mixture of manure, good soil, ashes or lime; in fact I find it next to good for nothing alone on light soils. I have experimented with it on garden crops for several years, and never could by its use alone obtain a crop of either beets, onions, cucumbers, squashes or melons. I had rather have one load of half rotted manure from the stable, than four loads of decomposed leaves, or muck, as it is called. It however answers an excellent purpose and pays well when carted into the yard in autumn, to be trodden by the cattle and exposed to the frosts of winter. Turf from the sides of the roads or commons, or even common soil in large quantities, used in the same way, I think far better and more profitable, than collecting leaves that the winds have scattered.

Buffalo, January, 1837. Obvious.

A few Reasons why Farmers are so far behind in Improvements.

Mr. Tucker—Having seen in your paper of the 1st inst. a call upon your subscribers for communications, and while thinking on the subject, I have seen an excellent letter from Ulmus, and also an article from the New-York Sun, which have partly anticipated what I had to say. I think with Ulmus that it is very desirable that Agricultural Schools should be established, or associated with literary establishments already formed, so as to afford to all an opportunity of obtaining the advantages thereof, as knowledge is power to the farmer, and as necessary to him as to other trades and professions. But to the question, why farmers are so far behind, if not when compared with other portions of the community in what constitutes real worth, certainly when compared with what they should be? In your State, and in all others that I have seen, very little land is brought into what can be called a tolerable state of productiveness, so as to pay the owners the interest of the money that they might take for them. Why is this the case? I shall venture to give, as the first reason, the very general mistake, which is this: instead of making what land they have profitable, they are for selling off and going to the west to get a larger number of acres.

The second reason—when a farmer has a number of sons he thinks he cannot find employment for them all at home, and therefore puts them to trades or professions.

Third reason—the pious veneration of children for lands received from their ancestors, seems to have lost its power to retain those possessions in the keeping of their descendants.

Fourth reason—that when a farmer obtains success in any of those fortunate occurrences that are bringing fortunes without labor, or whether they have accumulated money and property by patient industry and frugality, they seem in most cases not to think of laying it out to improve their lands, or to think such a thing can be done, or that their lands are susceptible of improvement, altho' their fields are encumbered with stumps, stones and other obstructions, that depreciate their value from 10 to 100 per cent.

Fifth reason is—that those boys that are expected to follow farming for a living, are considered to be well enough provided for in respect to education if they receive what is called a common one, and all that can be raised must go to pay for those who are gone to learn professions.

These, Mr. Editor, are some of the reasons, and sufficient, (though there are many more,) to account for what Ulmus complains of.

If you can correct these erroneous opinions and habits, I think you will do a great service to your country, and persuade farmers that they have land enough and need not go to the West, and that they have employment for

all their children thereon, for several generations, and need not send them to trades, to be lawyers, doctors, &c. or to New-York to be clerks or merchants, as all can be better employed at home, together with all the money and capital, with ample room for the application of all the skill and talent, whether natural or acquired. Let this system be followed for a few years and the country will present another appearance, and farmers will have another character and rank assigned them.

Mr. Editor, I would not have farmers raise grain, fruit, or furnish any thing else to make drunkards, as this kind of stock is the most unprofitable that the land can be made to produce, but I would have them blend ornament with usefulness and beauty with worth. J. K.

Toronto, U. C. January 25, 1837.

How shall I begin?

Mr. Tucker—You must excuse me for troubling you at this time, as I am now about to commence the business of farming, and heretofore have not enjoyed the privilege of perusing your paper, I may make some inquiries relating to subjects formerly elucidated in your sheet. Such as they are you are at liberty to notice them or not, just as you think the good sense of your readers may require.

My farm contains 220 acres of land, 120 under improvement; the soil is gravelly, with the exception say of about 20 acres of meadow land. There are no fruit trees on the premises of any description. Now, what I wish to know is the *modus operandi* in the business; the relative proportion of different grains; the kinds and quantities of stock; the quality and number of fruit trees, &c. &c.; finally what a farmer needs on such a farm, to secure the greatest profit with the least amount of labor. The synopsis of a plan to answer the question "How shall I begin?" will be very thankfully received, and the favor gratefully remembered. P.

"The Grape of America."

"There are hundreds of acres of grape vines," says the New-York Morning Star, "near the Great Descent in Arkansas, loaded with the richest clusters of grapes of the same quality with those producing the valuable wines in Europe. These grapes, (Vitis vinefera) are growing wild on the sands, and wasting their fragrance on the desert air." This, if true, is something new in Pomological History. Hitherto it has been supposed that this species was indigenous only to the old world; and altho' in the wilds of North America are found a number of distinct species of Vitis, not known in the old world, yet the *vinefera* was not to be found here till after it was introduced by Europeans. We should be glad to see this statement confirmed. W. W. B.

Vegetables feed on Vegetables.

The importance of every species of vegetable and animal matter, as a manure for the soil, may be made apparent to any farmer, by a few plain considerations.

Every kind of animal matter is derived originally from vegetables, and is convertible, by a natural process, again into vegetables. And every part of a vegetable is in like manner convertible into new plants.

The elementary matters of a species of vegetable are always the same; that is, a stool of wheat, or a stock of corn, grown this year, contains the same materials, and in about the same proportions, as they did last year. These materials, which constitute the wheat or the corn crop, are principally drawn from the soil; and consequently the fertility of the soil is diminished, in proportion to the number and amount of the crops which are carried off. However rich, therefore, a soil may be naturally, it must be evident, that every crop serves to diminish its fertility—that it becomes poorer and poorer every year until it is no longer worth cultivating—unless fertility is kept up by restoring to it the vegetable matters, or a large portion of them, which have been carried off. We have all seen this proved, in numerous instances, under the old system of farming. To prevent this decrease of fertility is one of the improvements of modern husbandry; and *it is prevented* by manuring and alternating crops. Under the old system the rich lands of the west will deteriorate till they are no better than those on the Atlantic border.—Under the system of manuring and alternating, the ordinary lands of Flanders have been made to maintain their natural fertility for hundreds of years, and those of China for thousands of years; and many of our worn out lands are now being in like manner renovated.

Again. That field of corn contains precisely what is necessary to constitute another field of corn. If it is all left to rot on the ground and permitted to decompose and mingle again with the soil it will make another like crop. But it is carried to the barn; the grain is consumed, and the stocks and shucks are eaten by the farm stock, or littered in the yard. If, after serving these purposes of the cultivator, the residue of the crop—the dung, the stalks, &c.—were carefully returned and blended with the soil, even then the deterioration of the field would be trifling. But this is seldom the case; these elements of fertility are suffered to waste, and if any, but a small portion of them are restored to the soil. The moment these stock, or the cattle dung, begin to ferment, their decomposition, or chemical separation of their parts commences—and this always takes place in the presence of heat, moisture and air—the gaseous matters, which they necessarily contained, and which are equally necessary to the coming crop, become disengaged and escape; the rains saturate and leach the mass, and carry off other matters which formed a part of the old, and which are also necessary to the new crop; and if fermentation is permitted to exhaust its powers on the mass, so as to reduce it to the form of muck, one half that constituted the old crop, and which the new crop will want, is irretrievably lost; but if the dung and stocks of the old crop, blended and saturated as they will be in the cattle yard, are restored to the soil, before fermentation and rain have dissipated their riches, the gases and liquids disengaged by fermentation will be absorbed by the soil, and held in reserve for the next crop. Hence the propriety of applying dung before it has rotted, or of applying the dung made in the winter to the spring crop; and hence the loss which ensues to the farmer from neglecting to convert to manure all the animal and vegetable refuse of his farm and household. Plants are cannibals; or in other words, they not only live upon plants, but they thrive best upon their own species. Nature is constantly changing dead into living vegetable matter, for the use of man, and it should be the business of the farmer to study her laws, and to co-operate in her beneficent designs.

Many of the objections to the use of long manure, in England, lose their force here. Our summers are much warmer than hers, and vegetable matters undergo a more speedy decomposition in our soil than in hers. The pertinent question is, does long manure decompose, when buried in the soil, in time to serve the crop? When put into the hill, or drill, we admit that it often does not; but when spread upon the whole surface, and properly buried, as we think it always should be, we believe it never fails to rot the first season, and in time for the corn crop. The late John Taylor, of Virginia, who was a scientific and extensively practical farmer was in the habit of burying with the plough, in his corn fields, the spray and branches of forest trees and shrubs, as means of inducing fertility, and he found benefit in the practice. Great Britain, besides, cultivates no crop that is so fit a recipient for long manure as our Indian corn, which enters so largely into our system of hushandry as to absorb, with potatoes, all the long manure of spring,—and which is admirably fitted to convert this long manure into proper food for dry crops by the subsequent autumn. We repeat here what we have before remarked, that unfermented dung greatly accelerates the growth of straw and stalk—the stem, culm, or main body of an herbaceous plant—but that it is ill suited to the perfecting and maturing of the seed;—that unfermented dung developes its greatest power during the heats of summer, when the seeds of the several grains are forming; that hence it is improper to apply it to these crops;—but that when applied to corn, or other autumnal ripening crops, it generates a beneficial warmth in the soil, and by the gases evolved, causes a vigorous growth of stocks, at a season most important; that fermentation subsides before the formation of the seed, and that it then imparts to the crop the aliment bestfitted to bring it to perfection. The doctrines of some British writers, who advocate the use of rotton dung, are not therefore applicable to our climate and culture.—*Cultivator.*

The effect of Soot on Wheat.

I had last week an opportunity afforded me by a friend who farms on a dry and inferior soil, of witnessing the effect of the application of soot on young wheat in the Spring. The field to which I now allude, has been partly dressed over at the rate of thirty bushels of soot to the acre, and it is quite astonishing to see the benefit it has afforded to the crop of wheat. Nothing can be more conclusive as to the virtue of this description of dressing than the experiment which I am now speaking of. The field was sown with wheat out of a clover ley, without any manure being laid on, the whole of the piece having been previously, in this year farmed in an exactly similar manner. The field is, perhaps, seven acres and about four acres (the poorest part of the inclosure) were selected for sowing the soot on; the remaining three acres not having any soot applied. I have no doubt but that at harvest there will be eight bushels of wheat more an acre on the part that was sooted, than there will be on the part to which no soot was applied. The cost of the soot was sixpence a bushel, being at the rate of fifteen shillings an acre, for thirty bushels. The whole of the expense attending the dressing will not exceed twenty shillings per acre, the increase of the value of an acre of wheat will be forty-eight shillings, or eight bushels of wheat at six shillings a bushel, thus leaving a net profit of twenty-eight shillings per acre, after deducting the cost and expenses of the soot; and as to any additional labor brought about by an extra crop, such as reaping, threshing, harvesting, &c. the increased quantity of straw will entirely liquidate it.—*Farmer's Magazine, London.*

Our Growing Village.

We can but commend that good taste of our villagers which expands itself, not in imitating the idle pageantry and expensive show of the gaudy metropolis;—but in adorning their yards and gardens with those decorations which nature makes cheap indeed to those who really love her. Tis true Flora is choice of her gifts to him who courts her only that she may contribute to his own ostentation! She loves to have her delicate tresses touched by her loving master's hand, or by the more delicate and kindly fingers of her mistress dear! She will be loved and caressed and cared for, for herself; then and not till then, will she yield her rich, fragrant, and sparkling treasures freely. Oh how my heart has ached to see a beautiful bed of flowers confined to the care of an idle, heedless tasteless boy—every individual of the bright and smiling family seemed instinctively to close their petals and wither at his rude touch.

But in proof that all should not love nature alike, I heard a gentleman exclaim the other day, that nothing but Dandelion posies should ever adorn his lawn;—this man is building a very ambitious house, with basements and caps on Venetian arches of choicest Oswego free stone. Some will say that this man is from the town and loves the works of art better than nature; no such thing;—he loves neither; he merely builds for the interest of the village, and to please his wife. He is nevertheless one of our most *talented* as he certainly is our most enterprising citizen. The poor bless him; two religious societies claim him; and he is the farmer's delight. What a blessed thing it is for us all that this man loves the turmoil, the responsibility, and the strife of business, better than poetry and posies.—*Waterloo Paper.*

Bleeding at the Nose.—Bleeding at the nose if it be ever so violent or protacted may be permanently stopped by the individual using some salted dried beef which has been granted fine with a nutmeg or other grater in the same way that he would take snuff; two or three pinches are said to be sufficient to stop any fit of bleeding.

Alum Mine discovered in New York.—A very rich mine, yielding alum in the proportion of two-thirds, and copperas in the proportion of one-third, has been discovered in Chatauque county, New York.

Deep Ploughing

We extract the following remarks on Ploughing, from an Address before the Central Agricultural Society of Lynchburgh, Va. by A. D. Johnson.

"1st. When a soil contans either animal or vegetable matter their decomposition may be promoted and it may be rendered fit for that which the soil gives out its sustenance. It is indeed the great mechanical employment to which nature has assigned the greater portion of the world's inhabitants. It should be applied then not with mere physical force, but with science—in a knowledge of the best mode and results in the productions and improvement of the soil. A variety of opinions still exists as to the proper depth to which the earth should be stirred and ameliorated. I unhesitatingly express it as my opinon that for the sole purpose of a lasting improvement, deep ploughing is essentially necessary in all soils. For an immediate crop on a shallow soil I admit that this mode not unfrequently operates deleteriously by mingling about the roots of the plants too much of the substratum. But a further crop will grow better by finding a deeper penetration for its roots. If the sub-soil be clay which I believe constitutes the under bed of nearly all our lands, it follows that deep ploughing contributes to a deep soil, which is not in danger of losing its fertility by a filtration of its vegetable nutriment into the beds below. Manures then, or vegetable matter, must have a tendency to ascend to the surface or to keep their place, and the roots of plants, find a ready medium for their extension to a depth, which is calculated to support a firm and vigorous top. All plants which have a tap or perpendicular root, surely require a considerable depth of tillage. But I must maintain, that all those with only *lateral* roots, grow best and are most fruitful in a soil deeply penetrated by the plough. A soil thus prepared is more retentive of moisture in a dry season, and loses its superabundance of moisture in a wet one. But there is another argument in favor of deep ploughing, which I make particularly as my own suggestion. It may not unfrequently happen that the surface soil may not be composed of due proportions of sand and clay. Perhaps the substratum might contain the necessary deficient ingredient, and might be within the reach of a moderately deep plough. In this case, might not the operation of deep ploughing produce the desired result? If the surface is clayey, stiff and heavy, it might mingle sand with it, and if it be too greatly silicious and light, it might bring to the surface the necessary quantum of clay. But this argument I will leave to the developement of the experimentalist. In favor of the deep cultivation of land, I will only say farther, that in England and Scotland, and Flanders, where farms are necessarily small, by reason of a dense population, and where lands are consequently tilled with care to their greatest production, in many instances, first broken with the spade forty, and fifty, and even sixty, bushels of wheat to the acre is a frequent production. The superabundance of their root crops would astonish the best farmer in Virginia.

To the advantage of deep ploughing I would suggest that of bedding in the fall. It occurs to me, that thin soils, either hill side or bottom, particularly such as are light and arid, would better sustain vegetation, and particularly young clover, by this operation. The plan I propose is to throw up the soil in the fall in beds of four to six furrows, having an especial regard to their horizontal direction, and leave it in that condition till the spring, when it should be seeded in oats and clover.

The settling and gradual abrasion of the beds through the snows and atmoshperic action of winter, will, I think, contribute to the sustenanee and growth both of the grain and clover. This should be one of the great objects of all our farming—to give to all our old hills, and repudiated fields, an incipient lifespring of clover. In father illustration of the reasoning I have advanced, I will mention the instannce of Baron Von Voght, in Germany, given by himself. On the soil of his manor, which was greatly sterile, he comenced his operations by ploughing moderately deep. He applied his improving and alimentary manures, and at every succession of tillage, he ploughed them into a still greater and greater depth. He regularly altered his implements to suit his purposed depth of ploughing, and the result was, in a few years, a soil as deep and fertile as his most sangiune feelings could have desired.

Hints on Feeding Horses.

In feeding horses with grain, the proper quantity of the respective kinds is regulated by weight, for in this proportion are the different kinds considered nutritious. As for example, we give to a horse per day half a bushel of oats, the weight of which is 17 lbs., and if we wish to change to other grain, as barley, rye, or Indian corn, the same weight will suffice; and as these grains are much heavier than oats, a proportionate less quantity, by measure will suffice. Another rule, deemed important, is this, that whenever heavier grain is substituted for oats, a quantity of fine cut straw should be added, as a substitute for the husk of the oats. This induces a more perfect digestion of the grain.

The practice of giving dry grain to horses when pastured, or fed with green cut grass, is condemned; for the grain thus given, is never perfectly digested, on account of the effect of the watery juices of the grass upon digestion. When dry grain and green feed are given, as much interval should be allowed between the dry and green food as circumstances will permit.

Von Thaer considers 8 lbs. of meadow hay equal in nourishment to 3 lbs. of oats; that hay improves by age, if well kept, and is most nutritious for horses when a year old; that the second growth is not equally nourishing; and that hay should not be unnecessarily exposed in making, the freshness of its scent being peculiarly gratifying to horses and cattle.

In Holland and Flanders, farm-houses are uniformly soiled during summer. A horse is supposed to consume from 84 to 100 lbs. of green food per day with occasional grain. An acre of clover, at two cuttings, will give twelve tons of green food; and hence half an acre of clover, fed green, will suffice for a horse four months.

It is also a general practice in Flanders, and is extensively adopted in Great Britain, to convert the entire food into *manger-meat*, that is, to mix the cut straw and hay, the grain and the roots, or whatever is to constitute the provender for the day, and to feed altogether in the manger, in regular messes. The value of this mode of feeding is alleged to consist—

"1. In its requiring a more thorough mastication of the food than when it is given in the common way, thereby assisting digestion, and consequently promoting the nutrition of the animal; for, it is not only true that old horses lose much of the power of mastication, and that young and greedy cattle are apt to devour a considerable part of their corn entire, when it is given alone, which passing through them in the same state affords no kind of nourishment, but all animals are known to derive nourishment from their solid food, in a certain degree, in proportion to the care with which it is chewed.

"2. It is consumed in less time.

"3. By the mixture of the materials, some portions of which, as damaged hay, or straw, might be refused if given separately, an equal consumption of the whole is secured.

"4. By its admitting of being more readily weighed, or measured, than when given separately, it can be more accurately distributed to each horse; on which it may be observed, that more injury is often done to horses by allowing them an unlimited quantity of rack-meat [uncut hay in the rack,] than even by stinting them to a scanty allowance; for they will not only pass whole nights in eating, when rest would do them more service, but, by this extraordinary distention of the stomach, its powers are weakened, and their general health is injured.

"5. It prevents waste, and consequently goes farther."

Mr. Wiggins, whose daily business extends to the feeding of three hundred horses, estimates the saving by the feeding entirely in this way, in the manger, at one sixth.

Rye is considerably employed as horse feed in America, particularly in Pennsylvania. It is generally coarsely ground, and mixed with cut straw or chaff, and moistened, by which the mass is incorporated.

Barley is extensively used in the south of Europe, in Asia Minor and in Persia, for feeding horses, for the reason, probably, that oats, being indigenous to colder climates, do not grow well in these countries. In the first of these countries it is uniformly fed with straw. Six bushels have been found, on trial, to be equal to eight bushels of oats. Barley contains twenty per cent more starch than oats, 5 per cent more saccharine matter, and 27 per cent less husk.

British writers have furnished us with estimates of the annual expense of keeping farm horses. One of these before us gives the aggregate expense of a two horse team and driver at about 90*l*. ($400.) This includes the interest on the cost of the team and implements, (270*l* and 10 per cent for repairs and deterioration. We state this fact for the purpose of calling the reader's attention to it. It imports, that allowing for the days when the team cannot labor, and assuming 260 working days in a year, that a team and driver should earn more than $1,50 a day for 260 days in a year, to pay cost; and that all they fall short in doing this, is absolute loss to the owner. The keep, in Britain, is probably higher however, than it is with us. Yet we are persuaded that few among us duly reflect upon the cost of maintaining a horse team in a plight requisite for doing good service. In Britain a team of good horses is considered adequate to the cultivation of 40 to 60 acres in tillage crops."—*Cult.*

Flax Culture.

In a summer tour through West New-York, we saw large and numerous fields of flax in Seneca and Tompkins, *cultivated merely for the seed*, the fibre of the flax being not deemed worth getting out for market. We confess this struck us with astonishment, after having published, in our April No. of this crop producing, in Jefferson, more thon a ton of dressed flax the acre, and knowing it to be worth to the manufacturer, from 180 to $220 per ton, at the manufactory. Mr. J. O. Dey, of this eity, has purchased several tons, for a manufacturer, of water rotted hemp, at 11 cents per lb. which is $220 per ton. We have been advised, that this indifference to the flax crop or rather to the flax, arises from a want of knowledge of the process of water rotting, and to the tedious operation of dressing it by hand. We are disposed to give instructions upon the first head, and beg that some gentleman, acquainted with the best process of extracting the fibre from the shive, will assist us to do it on the other, in the hope of preventing the further waste of a material essential to our manufactures and our comfort.

The process of water rotting flax is simple, and lasts but 10 or 12 days. It consists in preparing a pool or pond, near a stream, ot where water is at command, of sufficient capacity, into which the water may be introduced, and suffered to become warm. The flax is placed in this in small bundles, and kept beneath the surface by boards or plank and weights, until, by repeated examinations after the 7th day, it is fouud that the fibre will separate freely, when it is taken out, unbound & spread evenly upon the grass a few days to dry and bleach; and for coarse fabrics, it need only be suffered to dry.

It may be well to add, that flax does best on a light wheat soil, perfectly pulverized, that it should be put in with a bush harrow, and then rolled. An Irish report upon the culture of flax, recommends an open, black, loomy soil, enriched by having lain long in pasture, as being superior to a clay, or any other soil; and that either on the first or second crop after pasture, they have always found it to do better than after potatoes or turneps.

The sheaves, being made small, are placed in the pit, crosswise upon each other, until the pile rises to within six inches of the surface, when it is strewed with rushes, straw or any coarse rubbish, and loaded with blocks or stone to keep them down or suspended. The pit should not exceed six feet in depth, as otherwise it will not acquire the requisite or uniform warmth; the water should be clear and soft, though stagnant during the rotting process—the steeping being designed to effect a partial rotting by means of fermentation. The pit should not be shaded, as the sun and air should freely act upon it. The water in which flax had been steeped should not be given to cattle; but it affords a good liquid manure. Mr. Billings says, in his Survey of

Somersetshire, that he has found its effects, when applied to pasture lands by watering carts, to advance the land in value ten shillings per acre. He considered it superior to animal urine. It derives its fertilizing properties from the gummy matter separated from the flax in the steeping process.

The Flemish mode of steeping flax, as described in Radcliff's Flanders, is said to improve the quality of the lint greatly, to increase its whiteness, and to effect a saving of 10 per cent. in the product. It consists in placing the bundles in the steep vertically, instead of horizontally, as is the usual practice; in immersing the flax by means of transverse sticks, with that degree of weight annexed which shall not push it down to the bottom, but leave it the power to descend spontaneously towards the conclusion of the steepage; and of leaving at first a space of at least six inches between the bottom and the roots of the flax. The spontaneous descent of the flax is indication of its being sufficiently steeped and the strength and quality of the fibre are said to be much better preserved by this mode, in which the temperature of the atmosphere acts with more force upon the upper part of the plant, which containing the most gum, needs it most. Radcliffe gives the dimensions of a Flemish pool as two rods long, one rod wide, and six feet deep. Clear and soft water is preferred.

Loudon speaks of a practice, of recent introduction in England, of breaking and dressing both hemp and flax without rotting; and he gives a drawing of Hill and Bundy's machines for performing the process, without describing them or their mode of operation; but he does not leave us to doubt of its being a great improvement, calculated to abridge greatly the labor and expense of the process. "The machines are portable," says he, "and may be worked in barns or any kind of out-houses; they are also well calculated for work-houses or charitable institntions; a great part of the work being so light that it may be done by children and infirm persons; and such is the construction and simplicity of the machines, that no previous instruction or practice is required. The woody part of the hemp or flax is removed by a very simple machine; and, by passing through a second machine equally simple, the flax may be brought to any degree of fineness, equal to the best used in France and the Netherlands, for the finest lace and cambrick. The original length of the fibre, as well as its strength, remain unimpaired: and the difference in the product is immense, being nearly two-thirds—one ton of flax being produced from four tons of stem. The expense of working each ton obtained by this method is only five pounds [about $22.] The glutinous matter may be removed by soap and water only which will bring the flax to such perfect whiteness, that no further bleaching is necessary, even after the linen is woven; and the whole process of preparing flax, may be completed in six days."—*Enc. of Ag. p.* 850.

Hill and Bundy's machines, according to this veritable author, would have given to the immense quantity of flax thrown away in the west, an intrinsic value of fifty dollars to every ton of stems—and it amounted, we think probable, to some hundred of tons. It stands the manufacturer at least in hand, to inquire into the character of these machines, and to procure their introduction into the country.—*Cult.*

Make your Bulls work.

There is a practice among our farmers of letting their Bulls be idle. Their oxen and their horses work, but their bull, if any they keep, is a gentleman. He does nothing and of course gets fat and lazy. Now an animal of this kind in our State is not a very profitable one. We know from experience, that anxious as many are to improve their stock, they are *as anxious* to have it improved for little or nothing as they are that it should be improved at all. We are sorry to say that this is the case, but facts are stubborn things.

Now if a farmer would make as much profit from them as he ought, he must put him into the yoke and make him toil and tug as well as his oxen. They are rather bad characters to break and discipline, but when it is once done, they are excellent for labor. We know of one or two at this present time that are used to the yoke, and more powerful animals of their inches cannot be produced.

There is no danger of injuring them if they are properly fed and judiciously driven. When kept up in a stall or small yard, they are exceedingly apt to become lazy and sluggish, and ultimately good for nothing at all.

We have had them become so lazy, that they were totally useless for any purpose, and were under the necessity of driving them about every day for exercise in order to invigorate them and bring them to a proper state of health and activity. But the same animal when yoked every day, would never manifest any thing of the kind, but would always be "on hand" when his services were wanted.

This, therefore, is proof positive that work is a good regimen for them, and indeed the only way in which they should be used, provided they are kept in a thriving condition, as every one would desire to keep his team in order to make them profitable. We hope that our friends will keep an eye to the improvement of their stock. It is true that stock has been depressed in the market for two years past, but whoever lives to see another year, will find it advancing in price, and good stock will be in demand. Look out then for the main chance, be active and generous, and suffer no opportunity for reasonable improvement to escape.—*Maine Farmer.*

Knowledge—its worth.

The following extract is from the first number of *The Universal Educator*, a monthly paper just started at Cincinnati by Mr. N. Holley:

Knowledge is power.—It ennables man to subdue nature as in mechanical philosophy. It also confers the ability of governing and directing animals that are stronger than man and also of conquering savage beasts and savage men and rendering them subservient to the will of the intelligent. It ennables him to understand the laws and revolutions of the planetary worlds and thereby teaching the mariner to guide his vessel upon the trackless ocean. It also gives him the ability to understand and judge of his appetite and passions and to keep them under proper regulations, and whatever intellectual defects may have fallen to his lot he will be able in some measure to remedy or entirely remove.

Knowledge is wealth.—It enables the possessor to acquire property, where the less intelligent would necessarily be unsuccessful. This naturally follows from his acquaintance with the relations and states of society, and his ability of rendering valuable the resources of the country. This is fairly exemplified by the immense difference in this respect, between the aboriginals of this country and its present inhabitants. The latter having brought into requisition, iron, marble, cotton, and a thousand other things, both vegetable and mineral, altogether unknown and unthought of, by the former possessors of the soil.

Knowledge is happiness.—It enables us to place ourselves in such relations to persons and things, and to the present, past and future, as best comports with our enjoyment. It opens to us many sources of innocent delight—in thought—in imagination—in the arts and sciences—in literature—in natural history—and in music and poetry. It renders our animal nature subservient to our intellectual and moral being and enables us to hold intercourse with powers above us, rather than with beings beneath us, in the exercise of mere sensual enjoyments.

Knowledge is respectability.—It gives weight of character, and causes the possessor to be consulted even by those who may not be friendly in other respects. No one will quarrel with the pilot, when there is no other on board who can steer all safely into port. Knowledge may sometimes excite envy, but it will do this less than wealth or fame, or any other qualification.

Knowledge may also be said to be permanent.—A man may lose his property—he may be deprived of his possessions—his riches may take to themselves wings and flee away—his friends may forsake him—his character may be injured or destroyed—his health may decline, but while he retains his faculties, he cannot lose his intelligence. In this sense knowledge is a pearl of great price, which a person may carry about with him, without the danger of being robbed whether he travels by sea or by land.

All the above advantages, and many more, may be obtained by every one posessing extensive knowledge; and that all are justly entitled to such knowledge, is the point for which we strenuously contend, and for the attainment of which, we respectfully solicit the aid and co-operation of all.

Compost.—Mixing farm-yard dung, in a state of fermentation, with earth, in which there is much inert vegetable matter, as the banks of old ditches, or what is collected from the sides of lanes, &c. [or from marshes and swamps] will bring this inert dead matter, consisting of the roots of decayed grasses and other plants, into a state of putridity and solubility, and prepare it for nourishing the crops of plants it may be applied to, in the very manner it acts on peat. Dung, however, mixed with earth, taken from rich arable fields which have been long manured and cultivated, can have no effect as manure to other land that the same dung and earth would not produce applied separately; because there is generally no inert matter in this description of earth to be rendered soluble.—*Loudon.* Mr. Loudon, in the last part of the sentence, must allude to *fermented* manure—as the earth, in a compost of *un*fermented manure, will become enriched by the gases, if not the liquids, given off by the fermenting mass. Hence one advantage of covering unfermented manure heaps with earth. The compost, to be sure, is easiest made in the soil, and in the field.—*Cultivator.*

Ploughing.—It has been ascertained, that a team walking at the rate of one and a half and two miles an hour, will plough the following quantity of a medium soil, to the depth of five inches, in nine hours:

Inches.			A.	R.	P.
Breadth of furrow 8 at 1 1-2 mile per hour,			1	„ 0	„ 0
9	„	„	1	„ 0	„ 20
8 at 2		„	1	„ 0	„ 10
9	„	„	1	„ 2	„ 00

The difference in the quantity ploughed in these instances clearly demonstrates the value of action in horses; but it must at the same time be observed, that the distance traveled at the slow pace is only twelve, while at the quicker rate it is sixteen miles. —*Cultivator.*

The new Silk Factory at Dedham, Mass. is commencing operations. When in full operation it will run 1600 spindles, and employ 100 females.

Death of Mr. Cunningham.

Intelligence has been received of the death of Mr. Richard Cunningham, the Colonial Botanist, at Sydney, New South Wales. The unfortunate man was murdered by savages in the interior of the country, wither he had accompanied an expedition, whom he unfortunately wandered away from, in seareh of plants, (as was his duty as a Botanist,) and was lost in the bush, and never seen afterwards; but from intelligence gained from some of the natives, it was discovered that he was murdered by savages, who mistook him for an enemy. Mr. C. was a very able botanist, and of an amiable and obliging disposition, he was beloved and respected by all who knew him, and his death is unviersally lamented by every colonist in New South Wales, and his friends in England.

Thus within the short space of two years, we have to mourn the loss of three eminent British collecting Botanists, Mr. D. Douglass, who met his death in the Sandwich Isles; Mr. Drummon, who fell a victim to the unhealthiness of the Mexican climate; and the above unfortunate Mr. Cunningham,—all three of whom may be said to be martyrs to the science of Botany, and whose labors will never be forgotten from the many beautiful additions to our flower gardens, which each of them introduced, and many of which bear their names, and will transmit their memoirs to the latest prosterity.—*Flor. Cab.*

Brighton Nurseries.

FOR SALE, 20,000 Morus multicaulis, or Chinese Mulberry Plants, warranted the true and genuine kind. Orders addressed (by mail) to Messrs. WINSHIP, Brighton, Mass. for Mulberry, Fruit ond Ornamental Trees, Shrubs, Creepers, Herbaceous Perennials, &c. &c. that are cultivated in any nurseries in the United States, with a first rate collection of Green House Plants, will receive prompt attention, and if required, forwarded to any part of the Union.

Brighton, Jan. 18, 1837. 4t

From the Farmer and Mechanic.

Strawberries.

"Barren and Bearing Vines."

In a number of your paper some months since, I saw a communication from an Englishman under the above head, taken from the Newark D. Advertiser. It was calculated to be useful, but the writer, who does not appear to have been a Botanist, will not be understood by many of them, and from them gain little credence. He speaks of the strawberry, as having the male and female blossoms, on separate plants. this is not true, though to avoid repetition, I shall myself hereafter use the terms, male and female. The strawberry belongs to a class of plants, that have the male and female organs in the same blossom, and on the same plant. And this is the true reason why the subject is properly understood by so few scientific men. In the monthly strawberries, and all the white varieties that I have seen, the male and female organs are perfect in all the blossoms and plants, and are very productive, but the fruit is invariably small where the sexes are both perfect in the same blossom. In the early scarlet variety there are two kinds of plants. In the one the male organs predominate; in the other, the female. In the male plants the female organs are so far developed that two thirds the blossoms will bear small fruit, many of them imperfectly formed. In the female plants the male organs are so small that they cannot impregnate, but where impregnated from the male plants not one blossom will fail and the fruit will be large and fully formed. The male plants are the strongest aud most vigorous. The blossoms on the male plants, are double the size of the blossom of the female. In the male blossom, the female organs are small, and are scarcely perceptible, being buried beneath the male organs. In the female blossom, the male organs are not perceptible till the leaves of the flower are removed, when they will be found attached to the hull, small and defective. In the monthly and white varieties both the male and female organs are plainly to be seen. In the Hudson, which I presume is the same variety the writer I have alluded to calls the Higbee,the male organs are so defective in the one set of plants and the female so defective in the other, that an acre of either separate, would not produce perfect fruit. In raising from seed, both kinds are produced, but the male plants frequently have the female organs so far developed, as to produce some fruit. Again the male of one kind, will not always impregnate the female of all other kinds. The female of the true large Chili, I have never seen. I obtained the male from Prince, and about one blossom in fifty bore a fine fruit. I planted the female Hudson, and what I suposed to be the Pine Apple, by the Chili, with a view to make a cross variety: but not a single blossom was impregnated. I imported three years since from England, six varieties of strawberries. The labels were lost. Five of the kinds were all males, the other all females. One of the males, was a moderate bearer (say half the blossoms were impregnated) of medium sized fruit. Three of the males had blossoms of monstrous size, but not one blossom in fifty bore fruit. In a cooler climate, and stiffer soil, I believe they would bear better. The female when impregnated by other plants, bore fruit of very large size, though not highly flavored. I am raising from the seed of the males, in the hope of producing bearing plants, and should I succeed, shall expect very large fruit. I have found no English gardener acquainted with the subject. When last in Philadelphia, I found Mr. Buist, an English Horticulturist of science, making some experiments to test the principle. He admited that in England, many varieties were unproductive, and their cultivation discontinued,on that account,but supposed they had become barren by running. Mr. Buist insisted that Kean's seeding was certainly an exception to my rule, as they all matured their fruit both in England and this country. He took me to his bed, then in full bloom which he assured me bore abundantly; and there was not a male plant in the bed. I was disconcerted for a moment, but adjoining, he had a bed of Hudsons, in which there were males, and the mystery was solved in a moment as the male Hudson was sufficiently near to impregnate theKean. He then showed me a Kean, planted in a square, with no other vine near, and agreed to yield, if that did not bear well. I received a letter from him yesterday stating that it bore a few half formed fruit only. In conversation with the oldest Horticulturist in our country, the venerable Mr. Prince, I found him laboring under the same impression, and he attempted to prove to me, that barren vines were produced from bearing ones, by running, and stated as an evidence that in setting out new plantations, he frequently set but one male (blind was his term) to twenty females, and by running in three years, there would not be one bearing for one hundred barren vines. This was the theory of Miller, the celebrated English writer on Horticulture. The truth is, the male plant is more vigorous than the female, and bearing no fruit will form ten new plants, where the female forms one, and soon extirpate them from the bed.

I have been surprised to find our intelligent Botanists, and among them Doctor Torrey, justly preeminent, at a loss on this subject. The discovery was made by Duchesne, during the life of Linnæus and made known to him. Linnæus doubted and suggested to Duchesne, that he probably come to this conclusion, from some early blossoms killed by the frost. But further investigation proved Duchesne's principle correct. Twenty years since we raised few varieties of strawberries here except the Alpine monthly, as all others soon became barren as we supposed by running. At this period, a market gardener from Philadelpha settled in our neighborhood, and our market was soon filled with strawberries in great abundance, measuring from 3 to 4½ inches in circumference. Other persons bought his vines, but after one season they became barren. At this time I had near half an acre in vines, and could not raise enough for family use. The son of this man was in my garden one spring a few days before my vines were in blossom and observed to me, "I would have few or no strawberries as my vines appeared to him to be all males." I told him this was all folly, as the strawberries, belonged to a class of plants that invariably had the male and female organs in the same blossom. He observed, "he was no botanist and had been told the same thing before. But one thing he did know that my vines would bear no fruit." I requested him to find me a bearing plant. He found one and pointed it out. I requested him to show me the marks by which he could tell them apart. His reply was, "I could not then distinguish them but if in blossom I could readily distinguish them." I was aware from his manner, that he appeared to think he had said too much and wished to preserve his secret. I said no more, but marked the vine; when in blossom, I found the blossom of that plant no more than half the size of the others and in looking round could scarcely find one of them to the hundred and mostly small plants and smothered by the others. In a few days I found every blossom on these few plants swelled their fruit, whilst all the large blossom plants proved abortive. I directed the latter to be cut out. It was done, and the beds filled by new runners. The next season I still found near one fourth were male plants, and just before they were out of blossom, I had every plant of the male carefully cut out. That season I had a fine crop, but anticipating a much finer one the ensuing season; the more so when I discovered when again in blossom that not a single male had been left. The result was I had not a single fruit and was glad to get a few males from my neighbors.

For the last 10 years, I kept a few male and female Hudsons, in different parts of the garden, to make new beds from. Not a blossom of either, has ever produced fruit. As an experiment I planted a male by them and many of the female blossoms bore fruit. I have been induced to send you these remarks from having in a recent visit East found so many cultivators of this delicious fruit laboring in vain. In one of their first Colleges, where lectures were daily delivered on Botany, I found them cultivating the strawberry with great care, but a failure of fruit because less fortunate than I had been, in having a man who could neither read or write, to instruct them. At Frederick, I was at a garden of a scientific physician and a botanist who was a great admirer of the strawberry, and had the finest beds and cultivated with more care, than any I have ever seen. They were in full bloom, and not a single male plant. I observed to the lady, for the husband was from home, that I presumed these vines produced no fruit. She said that those beds had not: and they supposed it was too much in the shade, or the vines too old, but had made a fine new plantation and expected a great yield. I examined their new plantation but they were also all female plants.

I had frequently seen entire plantations of males before, but one all females was new to me. In both public and private gardens, I did not find the subject understood by more than one in twenty. To prevent an excess of males, the vines must be kept in separate hills, and not be allowed to run, or plant them in rows, and plant ten rows of female to one row of males.—The female rows may be allowed to run if the male runners are cut off once in two or three weeks, and in the fall the female plant can be cut into rows. The wind and insects will carry the farina to the female rows.

To have strawberries bear well and have large fruit the plants must be kept in hills, rows, or not suffered to stand too close together; where this is the case, the blossoms are smothered, and cannot be impregnated. Among the wild strawberries in the fields, nothing is more common than barren patches. These will generaly be found to be plants in which the female organs are deficient though occasionally of the other class with no males near them.

N. LONGWORTH.

Morus Multicaulis.

JOSEPH DAVENPORT offers for sale 50,000 plants of the true Chinese Mulberry, or Morus multicaulis. Trees will be carefully packed and forwarded as early as desired. Orders must be sent to Colerain, Mass. till the 15th of March; after which time to Hartford, Ct. All inquiries will be attended to at his plantation, 5 miles south-west of the city. Early orders only will be supplied, as arrangements will be made to use all not called for soon.

Colerain, Jan. 23, 1837.

AGRICULTURAL PAPERS.

THE publisher of the GENESEE FARMER, grateful for the patronage hitherto extended to his Agricultural papers, would give notice that a new volume (the 7th) of

The GENESEE FARMER, will commence on the first of January, 1837. It will be enlarged and otherwise improved, and no exertions spared to sustain the high rank it has attained. It is published every Saturday, in quarto form, making an annual volume of 416 pages, at $2 a year, *payable in advance.*

The 2d volume of the MONTHLY GENESEE FARMER also commences on the first of January. It is published on the first of each month, 16 pages large octavo, at 50 cents a year—Seven copies for $3—Twelve for $5, always in advance. All letters to come free of postage.

☞ Postmasters, and others in all sections of the country, are respectfully invited to act as agents to procure subscribers for these papers.

☞ Editors with whom we exchange, are reunested to copy the above.

Agricultural School.

AN election for thirty Directors of the New-York State Agricultural School, will be held at the Capitol in the city of Albany, on the 15th Feb. next, at 4 o'clock, P. M. Jan. 5, 1837.

J. BUEL, L. F. ALLEN, H. YATES, J. DELAFIELD, } Commissioners. { J. P. BEEKMAN, J. CENTER, W. CUNNINGHAM.

Subscriptions to the stock of the Company will be received by the several commissioners until the day of election.

jan 14 f3

To be Sold,

A VERY excellent Farm, beautifully situated, adjoining the village of Ancaster, near the head of lake Ontario, Upper Canada, about 7 miles from Hamilton and Burlington Bay; consisting of 200 acres (40 chains wide by 50 chains deep.) About 120 are in cultivation. There is a comfortable house, a well, &c. frame barn, a stable, wagon house separate from the barn, a good old orchard in full bearing, and the farm is well watered, having the Ancaster mill stream passing thro' it, and affords a sufficient fall for a flour mill. As two of the surveyed lines of the great western rail-road pass through the farm, the probability is that many village lots may be sold on the line adopted. Apply to the proprietor on the premises, or to the subscriber in Rochester.

jan 14 6t LUTHER TUCKER.

For Sale,

THE valuable Farm formerly owned by General Charle Thompson, situated in the town of Ovid, Seneca county; 3 1-2 miles south west of the village of Ovid, extending to the Seneca lake, containing about 870 acres of land; half of it improved, under a high state of cultivation and in first rate repair the remainder valuable timbered land, a large proportion of it white oak. On the premises is a large well finished two story dwelling-house, wood house, 4 tenant houses, 3 grain barns, with sheds and hay barns, &c.; the stock in which is included. 700 Saxony sheep will be sold with the farm if desired. For further information inquire of ASA SPRAGUE, Esq. Schenectady; DAVID HUDSON, Esq. Geneva; or of the subscriber on the premises. WM. R. SCHUYLER.

jan14 4t